

# **Former Nebraska Ordnance Plant (NOP) Mead, Nebraska**

## **- Site Background and Information -**

### **DESCRIPTION**

The former NOP site occupies approximately 17,250 acres located one-half mile south of Mead, Saunders County, Nebraska. During World War II and the Korean War, bombs, shells, and rockets were assembled at the site. The NOP included four bomb load lines, a Bomb Booster Assembly plant, an ammonium nitrate plant, two explosive burning areas, a proving range, a landfill, a wastewater treatment plant, analytical laboratories, and storage and administration facilities. Most of the raw materials used to manufacture the weapons were produced at other locations and shipped the NOP facility for assembly. Routine plant operations included washout of explosive materials prior to bomb loading and assembly, and bomb washing following assembly. Wash water was discharged to sumps and in open ditches.

During the 1950's and early 1960's, the US Air Force operated an Atlas Missile Launch facility. Construction and maintenance activities at the site resulted in the release of TCE, an industrial solvent, into the groundwater near Load lines 1 and 4.

Because the former NOP is a large site with different types of contamination in different locations, investigation and cleanup activities were organized in categories called "operable units". Three operable units (OUs) were organized to help expedite investigation and cleanup activities.

### **OPERABLE UNIT 1 - SOILS**

OU1, which includes soils contaminated with explosive compounds, was completed in 1999 with the excavation of soils and treatment through an on-site incinerator.

### **OPERABLE UNIT 2 - GROUNDWATER**

OU2 consists of a groundwater extraction and treatment system that hydraulically contains 11 square miles of contaminated groundwater, preventing its further migration to the south and east. The system consists of a network of thirteen extraction wells, two water treatment plants, and over 100 monitoring wells sampled on a quarterly basis. Two groundwater circulation wells are in operation to mitigate contamination hot spots. Focused extraction wells are planned for additional locations. Alternate water supply is provided to residents whose domestic wells are contaminated from military activities at the site.

#### ***OU2 History:***

1992 – Remedial Investigation completed

1995 – Feasibility Study completed

1997 – Record of Decision (ROD) signed

2002 – Extraction well network and treatment plant construction completed

***OU2 Chemicals of Concern with Target Cleanup Goals (per OU2 ROD):***

Methylene chloride:	5 parts per billion (ppb)
1,2-dichloropropane	5 ppb
Trichlorethene (TCE)	5 ppb
1,3,5-trinitrobenzene (TNB)	0.778 ppb
2,4,6-trinitrotoluene (TNT)	2 ppb
2,4 or 2-6-dinitrotoluene (DNT)	1.24 ppb
hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2 ppb

***OU2 Activities in 2007-2008***

• Additional plume investigations (Load Lines 2 & 3)	MAY 07
• Begin Advanced Oxidation Process Construction	JUL 07
• Vapor Intrusion Work Plan	AUG 07
• Draft Final Annual Remedy Performance Report (2006)	OCT 07
• Five Year Review	OCT 07
• Install new focused extraction wells	OCT 08

***Recurring OU2 Activities***

- Groundwater and surface water sampling quarterly (March, June, September, December).
- Residential well sampling. (Semi-annual for wells in plume or within ½ mile, annual for wells between ½ and 1 mile from plume)
- Annual Remedy Performance Report (Final Report in October). Comprehensive evaluation of groundwater containment system using groundwater sampling data (chemical and hydraulic), groundwater modeling, operations and maintenance data.
- Groundwater model updates – every two years.

**OPERABLE UNIT 3 – MISCELLANEOUS SITES, ORDNANCE AND EXPLOSIVES**

OU3 includes a former on-site landfill and former unidentified waste disposal areas not previously identified. Contaminants evaluated include metals, explosives, volatiles and semi-volatiles. The only chemical contamination requiring remediation is the heavy metal antimony, which was found in localized areas related to painting operations.

Ordnance and explosives, previously managed as a separate project, will be merged into the CERCLA process. Long term management of OE will be under the future OU3 Record of Decision. OE sites include locations where off-spec ordnance components such as fuses and detonators were destroyed and disposed of. A suspected disposal location near the former landfill for mustard agent identification kit is also managed under this OU.

***OU3 History:***

1996 – Ordnance & Explosives Engineering Evaluation & Cost Assessment (EE/CA)  
1996, 1997, 1999 – Ordnance Removal Actions  
1997 – Remedial Investigation (RI) and Baseline Risk Assessment  
2000 – RI Addendum  
2000 – Feasibility Study  
2002 – Ordnance & Explosives Recurring Review

***OU3 Activities in 2007-2008***

- Interim Removal Action – antimony contaminated soils    SEP 07
- OE Recurring Review 2007 Final Report    OCT 07
- OU3 Proposed Plan    TBD 08
- OU3 Record of Decision    TBD 09

**COMMUNITY INFORMATION SOURCES**

- Restoration Advisory Board Meetings quarterly
- Annual public site tour – June
- Project Information Repository – Mead Public Library
- Project web site: <http://www.nwk.usace.army.mil/projects/mead/projectindex.html>

**POINTS OF CONTACT**

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